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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,670	01/15/2002	Gregory T. Kohler	655.01034(Index 979)	5278

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02/07/2005

WOOD, PHILLIPS, VAN SANTEN, CLARK & MORTIMER  
SUITE 3800  
500 WEST MADISON STREET  
CHICAGO, IL 60661

EXAMINER

LEO, LEONARD R

ART UNIT

PAPER NUMBER

3753

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/047,670

Applicant(s)

KOHLER ET AL *en*

Examiner

Leonard R. Leo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,8,11 and 13 is/are rejected.
- 7) ☒ Claim(s) 3,4,6,7,9,10,12 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

The response filed on October 29, 2004 has been entered. Claims 1-15 are pending, and claims 2 and 15 remain withdrawn.

#### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "46" has been used to designate both the port and tank in Figure 3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification***

The disclosure is objected to because of the following informalities: the recitation of "cavity 32" on lines 4-5 of page 11 is inconsistent.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill

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in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 8, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kocher, Brogan or Turner et al in view of Dalo et al, Ryan et al or Ando.

Kocher, Brogan or Turner et al discloses all the claimed limitations except a flattened tube in a heat exchanger.

Dalo et al discloses a heat exchanger comprising a fluid coupling having a combined cap and tank assembly 10 connected to tube 14, wherein the tube may have a flat or round cross-section (column 1, lines 19-20) for the purpose of achieving desired flow and/or internal pressure requirements.

Ryan et al discloses a heat exchanger comprising a fluid coupling having a cap 26 and tank 14 connected to tube 18, wherein the tube may have a flat or round cross-section (column 5, lines 1-5) for the purpose of achieving desired flow and/or internal pressure requirements.

Ando discloses a heat exchanger comprising a fluid coupling having a combined cap and tank assembly 4 connected to tube 2, wherein the tube may have a flat or round cross-section (column 4, lines 36-40) for the purpose of achieving desired flow and/or internal pressure requirements.

Since Kocher, Brogan or Turner et al and Dalo et al, Ryan et al or Ando are both from the same field of endeavor and/or analogous art, the purpose disclosed by Dalo et al, Ryan et al or Ando would have been recognized in the pertinent art of Kocher, Brogan or Turner et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Kocher, Brogan or Turner et al a heat exchanger tube having a flat or round cross-section for the purpose of achieving desired flow and/or internal

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pressure requirements as recognized by Dalo et al, Ryan et al or Ando. As demonstrated by Dalo et al, Ryan et al and Ando, flat and round tubes are mere alternates of one another.

Regarding claims 11 and 13, the flattened or oval tubes of Dalo et al, Ryan et al or Ando would mate with a cavity having a corresponding shape in the devices of Kocher, Brogan or Turner et al.

***Allowable Subject Matter***

Claims 3-4, 6-7, 9-10, 12 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Upon further review, claims 11-14 are read on the elected species of Figure 3. This Office action is nonfinal, since the merits of the claims were not earlier examined.

Regarding applicants' remarks with respect to Kocher, Brogan or Turner et al, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the novelty of the instant invention is not solely based on the heat exchanger structure, rather the structure providing fluid coupling of components to define a heat exchanger. The recitation of "A heat exchanger" in the preamble does not set forth the metes and bounds of the claim. As such, only the structures recited in the body of the claim define the "heat exchanger" device. In fact, any structure is capable of

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exchanging heat whenever a temperature difference is present. The tubes of Kocher, Brogan or Turner et al are clearly capable of exchanging heat.

However, the claim rejections are based on a combination of references. The secondary references of Kocher, Brogan or Turner et al teach coupling components of a heat exchanger for tubes having either circular or flattened cross-sections. In response to applicants' argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the secondary references of Dalo et al, Ryan et al or Ando teach circular tubes and flattened tubes are obvious alternates of one another. There is no novelty in employing a known tube cross-section with another known tube cross-section, especially when the prior art explicitly discloses the obvious substitutions.

Applicants' arguments are not commensurate in scope with the claims. The fact that the primary references of Kocher, Brogan or Turner et al disclose removability by compression fittings is of no consequence, since the instant claims do not preclude this feature.

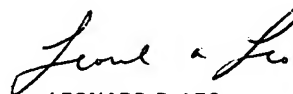
No further comments are deemed necessary at this time.

*Conclusion*

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard R. Leo whose telephone number is (571) 272-4916. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



LEONARD R. LEO  
PRIMARY EXAMINER  
ART UNIT 3753

February 3, 2005